AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
******	1 | 3

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
0003	04 JAN 21	98110 /33219031	

6. ISSUED BY CODE N65540

NSWC CARDEROCK DIVISION
5001 S. BROAD STREET, CODE 335
PHILADELPHIA PA 19112-1403
BUYER/SYMBOL: LINDA STIEMKE
PHONE NO. 215-897-1355

7. ADMINISTERED BY (If other than item 6) CODE

8. NAME AND ADDRESS OF CONTRACTOR (No.,street, county, State and ZIP Code)

CODE FACILITY CODE

(X) | 9A. AMENDMENT OF SOLICITATION NO.
X | N65540-04-Q-0052

9B. DATED (SEE ITEM 11)
03 DEC 19

10A. MODIFICATION OF CONTRACT/ORDER NO.

10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [X] is extended, [ ] is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods.

(a) By completing items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATION OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X) | A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

SEE PAGES 2 AND 3 FOR DESCRIPTION OF AMENDMENT.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)	16C. DATE SIGNED

1) This amendment is issued to respond to the following questions submitted by prospective offerors;

   1) **Question:** No single line drawing was supplied.
   Answer: A one-line diagram for the 15kV Switchboard is provided as Attachment 2 to this amendment for informational purposes only.

   2) **Question:** Specification refers to 1000MVA, but the short time rating & close & latch ratings match a 750MVA breaker. A 750MVA (40kA) breaker will be supplied. Please confirm if OK.
   Answer: Yes, it is sufficient for the breakers to be capable of safely interrupting 40kA RMS symmetrical current and for the bus-work to be braced for a 1000MVA fault.

   3) **Question:** Per ANSI standards interrupting time is 5 cycles not 3 cycles. 5 cycle breakers will be supplied.
   Answer: Five cycle breakers are not acceptable. The interrupting time of three cycles called for in the Specification is faster than standard. The speed performance will be the subject of testing performed with the Switchboard covered by this RFQ. As a result, a slower interrupting time is not acceptable.

   4) **Question:** Specification refers to: "Backup Control power for electrical operation – 200 seconds. This is interpreted that up to 200 seconds a single discharge will be available from a module. Not that a module will supply continuous voltage & current for 200 seconds, similar to a UPS. Please confirm.
   Answer: The breaker needs to be capable of at least one operation for up to 200 seconds after control power is lost.

   5) **Question:** The maximum number of MOC contacts available is 9a+ 9b. The maximum number of TOC contacts available is 6a+ 6b.
   Answer: The Section # 1 Upper Feeder, Section # 1 Lower Main and Section # 2 Lower Feeder must have Mechanism Operated Contact (MOC) Switch and Truck Operated Contact (TOC) Switch supplying at least 10 additional contacts, as stated in the Specification. MOC contacts of 9a+ 9b and TOC contacts of 6a+ 6b are not acceptable.

   6) **Question:** Specification does not indicate the purpose of the voltage transformers, are voltmeters, multi-function power meters or under-voltage meters required? Please clarify.
   Answer: The voltage transformers are for the user's own protection, control, and monitoring circuits. No additional metering devices are required.

7) **Question:** Following options are available: lockout relays, voltmeter, voltmeter selector switch, power meter, under-voltage meter, lift truck. Please inform if these are required?
Answer: The lockout relays and lift truck are required; the other listed items are not. The Specification has been changed to reflect this requirement.

8) **Question:** What is the Power Cable entry required for Main Breaker and for Feeder Breakers in the application?
Answer: Power Cable entry shall be made from the bottom of the switchboard. The Specification has been changed to reflect this requirement.

9) **Question:** We are asked to include Federal, State & local Taxes & duties? Is the Govt. not exempt from paying these taxes? If not then please indicate the % of Tax needed to pay for Federal, State & local Taxes & duties in your zip area. As a small business, I presently do not have access to this information.
Answer: While purchases made by the Federal Government are generally immune from state and local taxes, this is not always the case. The applicability of state and local taxes is generally dependent upon the geographic location of the contractor. Therefore, Clause 52.212-4 of the subject RFQ requires offerors to include any applicable taxes in their price proposal.

10) **Question:** Progress payments requested. Please confirm if progress payments will be allowed.
Answer: The subject RFQ does not provide for progress payments since it does not meet the conditions contained in Section 32 of the Federal Acquisition Regulation (FAR).

2) As a result of the above questions, the 15kV Switchboard with Circuit Breakers Specification has been revised. The revised Specification dated 20 January 2004 is provided as Attachment 1 to this amendment.

3) Wednesday, 28 January 2004 at 1500 hours (3:00 PM EST) is hereby established as the due date for the receipt of quotations.

Attachments

1 15kV Switchboard with Circuit Breakers Specification dated 20 January 2004 (4 pages)

2 15kV Switchboard One-Line Diagram (1 page)

January 20, 2004

15KV SWITCHBOARD WITH CIRCUIT BREAKERS SPECIFICATION

The 15kV switchboard shall be in accordance with IEEE Standard C37.20.2-1999 and cable entry for each of the two sections shall be bottom entry. The switchboard will be operated and tested for performance while energized and subjected to a salt-water mist fire suppression system discharge. The 15kV Metal Clad Switchboard with Circuit Breakers and Potential Transformers to be furnished shall be NEMA 3R (approved for outdoor use, protection against falling rain, sleet, external ice formation) and in accordance with the following requirements:

1. Two Section Line-Up
   - 1.1 Switchgear Assembly
   - 1.2 Label Requirements: UL
   - 1.3 Outdoor, Non Walk-In (NEMA 3R) With Front and Rear Access
   - 1.4 Rear Door NEMA Type 3R with Padlock Provisions

2. General Equipment Ratings
   - 2.1 Frequency: 60 Hertz
   - 2.2 Impulse Withstand Voltage (BIL): 95kV
   - 2.3 Maximum Bus Continuous Current: 2000A
   - 2.4 Maximum Short Circuit Current: 40kA (RMS Symmetrical)
   - 2.5 Maximum Voltage: 15kV
   - 2.6 Nominal System Voltage: 13.8/7.97kV, 3 Phase, 3 Wire, Highly Resistive Grounded Wye
   - 2.7 One-Minute Withstand Voltage: 36 kV RMS
   - 2.8 MVA Class: 1000 MVA

3. General Structure Information
   - 3.1 120 VAC Receptacle and Incandescent Light (per section)
   - 3.2 2000A Silver Plated Copper Main Bus
   - 3.3 Auxiliary Control Power: Govt. Supplied 120VAC
   - 3.4 Breaker Close Control Power: Govt. Supplied 120VAC
   - 3.5 Breaker Trip Control Power: Govt. Supplied 120VAC
   - 3.6 Bus Bracing: 40kA (RMS Symmetrical)
   - 3.7 Bus Supports: Epoxy (Std)
   - 3.8 Control Wiring: #14 AWG type SIS (600V, flame retardant) Wire
   - 3.9 Exterior Paint Color: ANSI #61, Light Grey (Std)
   - 3.10 Ground Bus: Copper, Un-plated (Std)
   - 3.11 Lug Type: Supplied by Govt.
   - 3.12 Screw Terminal Blocks, Insulated
   - 3.13 LED indicating lamps, (2) per cell
   - 3.14 Provide Device Nameplate
   - 3.15 Switchgear to be "draw out" type
   - 3.16 Heaters, 300W / 240V (8) per frame

4. Overall Dimensions
   4.1 Width: 72.00" or 36" per section
   4.2 Height: less than 122"
   4.3 Depth: less than 112"
   4.4 Approximate Weight: less than 10,500 lbs.

5. Switchgear to Include:

SECTION #1, UPPER FEEDER

1 – 15kV Max. Voltage Breaker with the following functions and features:
- Three Phase MVA = 1000 MVA
- Nominal Voltage Rating = 13.8 kV
- Rated Continuous Current = 2000A
- Low Frequency Withstand Voltage = 36 kV
- Impulse Level (BIL) = 95 kV
- Rated Short Circuit Current = 40,000 A
- Short Time rating, 2 sec, Amps RMS = 40,000 A
- Close and Latch Rating, Amps RMS = 104,000 A
- Interrupting Time = 3 cycles
- Epoxy Encapsulated
- Magnetically Activated

3 – Single Ratio 2000:5 CT, 0.3% Accuracy
1 – Breaker Control Switch (trip, close)
1 – Mechanism Operated Contact (MOC) switch supplying at least 10 additional contacts
1 – Truck Operated Contact (TOC) switch supplying at least 10 additional contacts
1 – Capacitor – Trip Device
1 – Backup Control power for electrical operation - 200 seconds
1 – Relay with the following functions:
- 50 (Instantaneous over current)
- 51 (Time over current)
- Remote Communications, 4/4 I/O

SECTION # 1, LOWER, MAIN –

1 – 15kV Max. Voltage Breaker with the following functions and features:
- Three Phase MVA = 1000 MVA
- Nominal Voltage Rating = 13.8 kV
- Rated Continuous Current = 1200A
- Low Frequency Withstand Voltage = 36 kV
- Impulse Level (BIL) = 95 kV
- Rated Short Circuit Current = 40,000 A
- Short Time rating, 2 sec, Amps RMS = 40,000 A
- Close and Latch Rating, Amps RMS = 104,000 A
- Interrupting Time = 3 cycles

SECTION # 1, LOWER, MAIN – (continued)

- Epoxy Encapsulated
- Magnetically Activated

3 – Single Ratio 1200:5 CT, 0.3% Accuracy
1 – Breaker Control Switch (trip, close)
1 – Mechanism Operated Contact (MOC) switch supplying at least 10 additional contacts
1 – Truck Operated Contact (TOC) switch supplying at least 10 additional contacts
1 – Capacitor – Trip Device
1 – Backup Control power for electrical operation - 200 seconds
1 – Relay with the following functions:

- 50 (Instantaneous over current)
- 51 (Time over current)
- Remote Communications, 4/4 I/O

SECTION #2, UPPER, Auxiliary

2 – Draw Out Switchgear Tray with Line-to-Line Potential Transformers with the following functions and features:

- (3) 14.4kV/120V
- Impulse Level (BIL): 95kV
- 60 Hz nominal frequency
- 0.3% Accuracy
- Withstand 125% of rated voltage for 2 minutes
- Mylar Film insulation to primary and secondary coils
- Polyurethane formulated core and coil assembly
- Load break bushing wells rated for PT current
- Each phase fused

SECTION #2, LOWER, FEEDER –

1 – 15kV Max. Voltage Breaker with the following functions and features:

- Three Phase MVA = 1000 MVA
- Nominal Voltage Rating = 13.8 kV
- Rated Continuous Current = 1200A
- Low Frequency Withstand Voltage = 36 kV
- Impulse Level (BIL) = 95 kV
- Rated Short Circuit Current = 40,000 A
- Short Time rating, 2 sec, Amps RMS = 40,000 A
- Close and Latch Rating, Amps RMS = 104,000 A
- Interrupting Time = 3 cycles
- Epoxy Encapsulated
- Magnetically Activated

3 – Single Ratio 1200:5 CT, 0.3% Accuracy
1 – Breaker Control Switch (trip, close)

SECTION #2, LOWER, FEEDER (continued)–

1 – Mechanism Operated Contact (MOC) switch supplying at least 10 additional contacts
1 – Truck Operated Contact (TOC) switch supplying at least 10 additional contacts
1 – Capacitor – Trip Device
1 – Backup Control power for electrical operation - 200 seconds
1 – Relay with the following functions:

- 50 (Instantaneous over current)
- 51 (Time over current)
- Remote Communications, 4/4 I/O

6. The Switchboards shall be furnished with lockout relays and a lift truck for breaker handling.

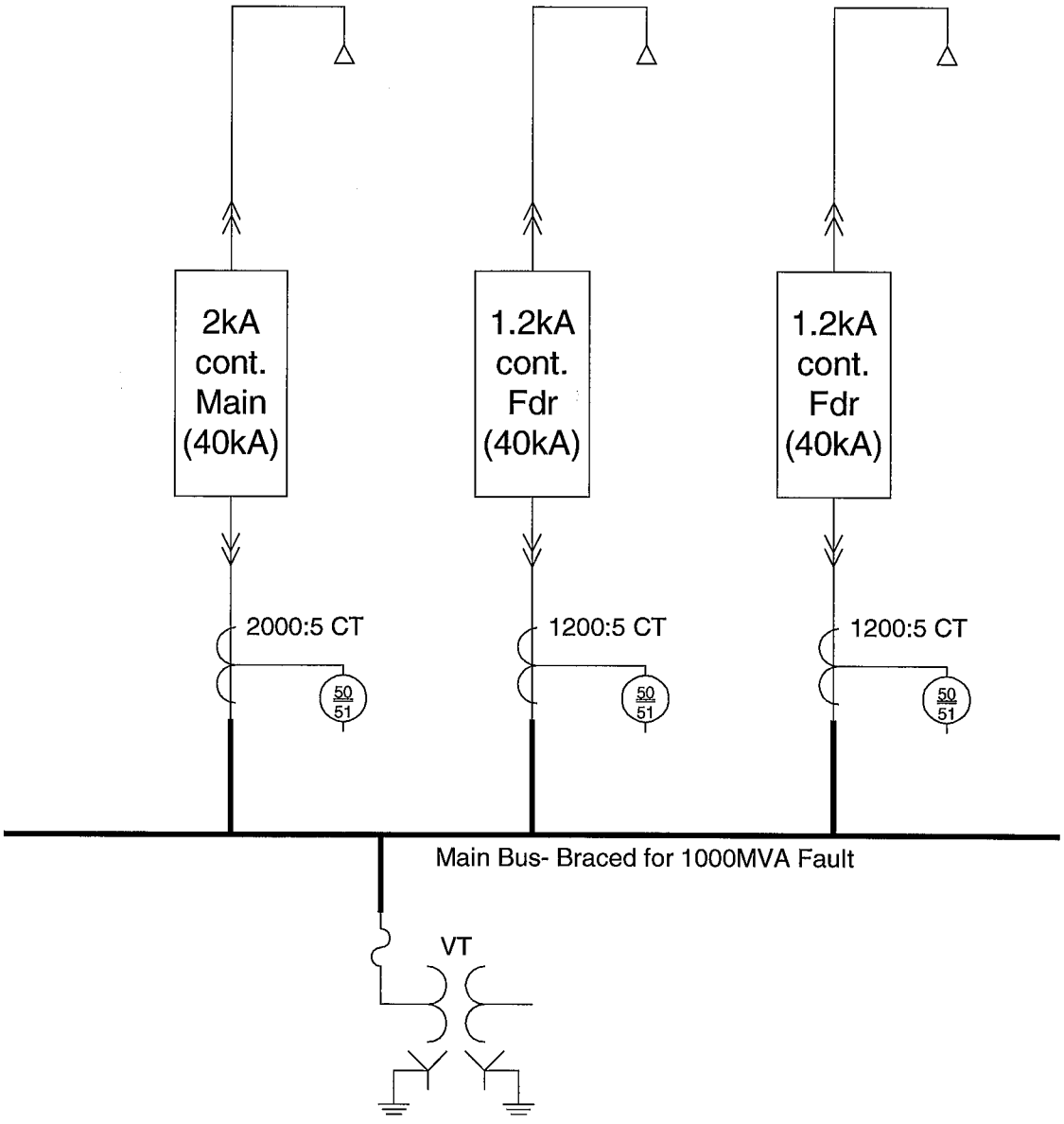

Figure 1. 15 kV Switchboard Electrical One-Line Diagram.